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United Kingdom(51) INT CL⁵

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(58) Documents Cited

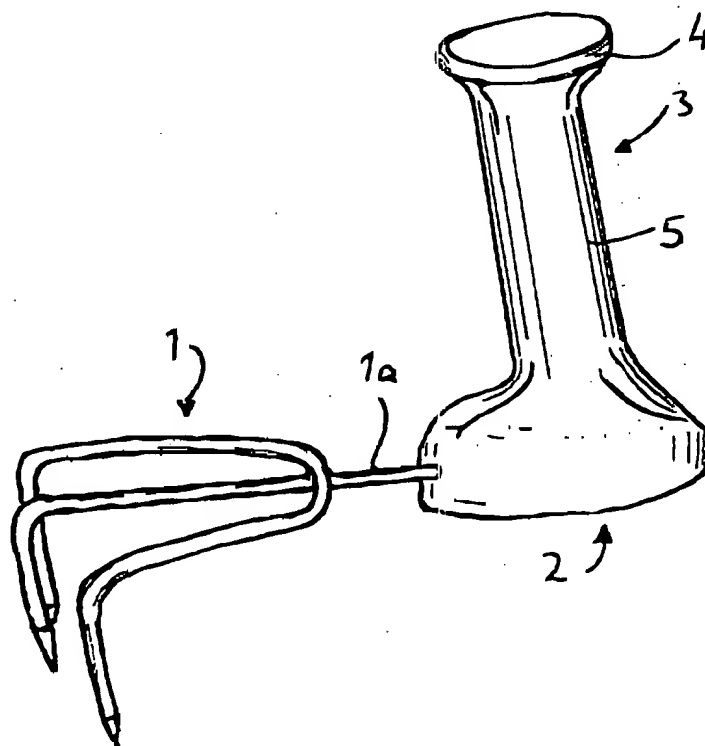
GB 2205221 A GB 0594526 A GB 0403504 A
GB 0326485 A

(58) Field of Search

UK CL (Edition M) A1B B1A B1B B1C B1D B1E B1F
B1G B1J B1K B1L B4K KAA KJE KJF KJG KJH KJL
KJN KJP KJQ KJR KJS KJT KJU KJW
INT CL⁵ A01B 1/00 1/02 1/06 1/16 1/22 A01D 1/08
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(54) Garden hand tool

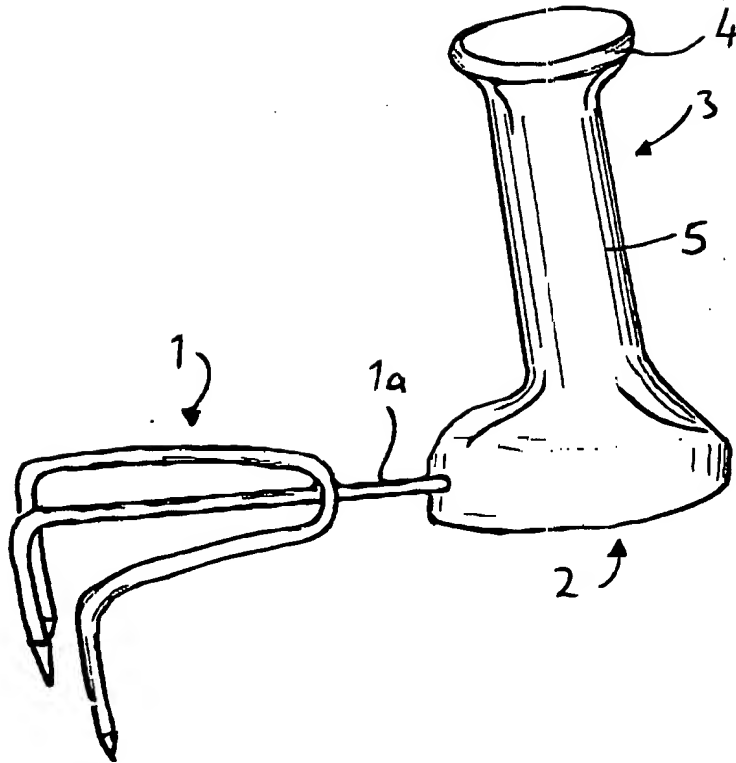
(57) A garden hand tool has a handle 2 with a ground-engaging tool head 1 extending from it in a direction normal to the axis of the handle. The tool-head 1 can be a raking or cultivating tool as shown, or a trowel or hoe or other tool for single-handed use for small-scale work in flower beds, window-boxes and the like. The handle 2 has a hand-grip 3 extending from it upwardly and slightly forwardly with a widened portion 4 at its end to prevent the grip slipping downwardly out of the user's fist.



The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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GARDEN HAND TOOLField of the Invention

This invention relates to a garden hand tool, of the type usable single-handedly, for example a trowel, hand fork or the like.

Background to the Invention

Conventional garden hand tools are provided with a straight handle with the tool head extending from the end thereof. This arrangement has been standard for a very long time. Its disadvantage is that the user's wrist has to be bent over, in use, since the handle and tool head are directed as an extension of the user's forearm. For many users, this can be uncomfortable, and for some, particularly those with a physical disability, it can be impossible. The present invention provides a garden hand tool which can be used by many disabled gardeners and which will be more comfortable for most users.

Summary of the Invention

According to the invention there is provided a garden hand tool having a handle with a ground-engaging tool head extending therefrom in a first direction, the handle having a hand-grip extending to one side of the handle in a direction substantially normal to the first direction.

Preferably, the hand-grip is angled slightly forwardly of the normal towards the tool head. The hand-grip may be shaped to conform closely with the user's hand, for example

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in the manner of computer joysticks and the like. The upper end of the grip is preferably widened to prevent the tool sliding downwardly out of the user's fist, in use.

The tool head may be any earth-turning, digging or raking tool, for example. Examples are trowels, rakes and hoes of the type intended to be used single-handedly for small-scale work in flower beds, window-boxes and the like.

The hand-grip is suitably formed of a plastics material, and is preferably moulded as an integral unit with the handle part into which the shaft of the tool head is moulded. As an alternative, the handle may be adapted to receive different tool heads interchangeably.

Brief Description of the Drawings

The drawing is a perspective view of a hand rake according to a preferred embodiment of the invention.

Detailed Description of the Illustrated Embodiment

The hand rake has a three-pronged rake form of tool head 1 of conventional design extending from a handle 2 having a hand-grip 3 angled towards the tool head so that its axis makes an acute angle with the normal to the axis of the handle and the axis of the shaft 1a of the tool head, for example of 5° to 15°. The upper end 4 of the hand-grip 3 has a wider boss form to abut the thumb and forefinger of the user's hand, in use, to prevent the grip slipping through the user's fist, for example if the tool is loaded and the user has a weak grip, or a damp hand. The main part 5 of

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- 3 -

the grip 3 may be shaped to conform with the user's fist, with individual formations for the user's fingers, in conventional ergonomic form.

In use, the user's wrist is kept straight, in relation to the forearm, through all raking or digging actions, the tool becoming effectively an extension of the user's forearm. This puts much less strain on the user's wrist which, with conventional hand tools, has to bend variably during the different actions of the tools. The user will therefore find the tool much more comfortable to use for prolonged periods. The different grip position does not inhibit any of the possible actions of the tool, in use.

It will be appreciated that the raking head illustrated in the drawing is just one of many different forms of tool head which can be used in the garden hand tool of the invention.

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CLAIMS

1. A garden hand tool having a handle with a ground-engaging tool head extending therefrom in a first direction, the handle having a hand-grip extending to one side of the handle in a direction substantially normal to the first direction.
2. A garden hand tool according to Claim 1, wherein the hand-grip is angled slightly forwardly of the normal towards the tool head.
3. A garden hand tool according to Claim 1 and 2, wherein the upper end of the hand-grip is widened to prevent the tool sliding downwardly out of the user's fist, in use.
4. A garden hand tool according to Claim 1, 2 or 3, wherein the hand-grip is moulded as an integral unit with the handle part into which the shaft of the tool head is moulded.
5. A garden hand tool according to Claim 1, 2 or 3, wherein the handle is adapted to receive different tool heads interchangeably.
6. A garden hand tool, substantially as described with reference to, or as shown in, the drawing.

Patents Act 1977**Examiner's report to the Comptroller under Section 17****(The Search report)**

Application number

GB 9312038.4

Relevant Technical Fields

(i) UK Cl (Ed.M) B4K (KAA, KJE, KJF, KJG, KJH, KJL, KJN, KJP, KJQ, KJR, KJS, KJT, KJU, KJW) A1B (BIA, BIB, BIC, BID, BIE, BIF, BIG, BIJ, BIK, BIL)

(ii) Int Cl (Ed.5) AO1B (1/00, 02, 06, 16, 22); AO1D (1/08, 14); B25G (1/00; 3/00)

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Search Examiner
H F YOUNG

Date of completion of Search
19 MAY 1994

Documents considered relevant following a search in respect of Claims :-
1-6

Categories of documents

- X: Document indicating lack of novelty or of inventive step. P: Document published on or after the declared priority date but before the filing date of the present application.
- Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A: Document indicating technological background and/or state of the art. &: Member of the same patent family: corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2215221 A	(McCLUSKEY) see Figure	1, 2, 5
X	GB 591526	(BAKER) see Figure	1, 2, 5
X	GB 401504	(GARNAR) see Figure	1, 2, 5
X	GB 321485	(WORKMAN) see Figures 1-6	1, 2, 5

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).